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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,352	02/14/2001	Donald J. Lewis	200-1731	1057

28413 7590 01/28/2003

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EXAMINER

TRAN, DIEM T

ART UNIT

PAPER NUMBER

3748

DATE MAILED: 01/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/783,352

Applicant(s)
Lewis

Examiner
Diem Tran

Art Unit
3748



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-7 and 9-13 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-7 and 9-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

1. -This office action is in response to the Appeal Brief filed on 11/18/02. The arguments have been considered and are persuasive with respect to the references applied, however, a new , recently issued reference has been uncovered by the Examiner, a new non-final is set forth below based on the recently issued Patent.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by Okada et al. (US Patent 6,497,846).

Regarding claim 5, Okada discloses a method of controlling an air-fuel ratio in an internal combustion engine, comprising the steps of purging hydrocarbons from an emission control device (see col. 4, lines 25-29); and the step of adjusting the air-fuel ratio in the engine rich of stoichiometry while purging the hydrocarbons (see col. 5, lines 20-35, col. 6, lines 65-67, col.7, lines 1-8).

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4. Claims 9, 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Tengblad et al. (US Patent 5,867,982).

Regarding claim 9, Tengblad discloses a system for controlling an air/fuel ratio in an internal combustion engine, comprising:

a hydrocarbon trap positioned in an exhaust path downstream of the engine (see col. 9, lines 46-49); an air supply (16) device capable of selectively providing a supply air to said exhaust path upstream of said hydrocarbon (see Figure 1); a controller for biasing the air-fuel ratio in the engine rich of stoichiometry during a time period when said air pump is providing air to said exhaust path (see col. 7, lines 40-67, col. 8, lines 1-5).

Regarding claim 10, Tengblad further discloses said air supply device is an air pump (see col. 7, lines 65-67, col. 8, lines 1-5).

Claim Rejections - 35 USC § 103

- 5 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada et al. (US Patent 6,497,846) in view of Hirota et al. (US Patent 6,367,246).

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Regarding claim 6, Okada discloses all the claimed limitations as discussed in claim 5 above, however, fails to disclose said purging step comprises providing air from an air supply device to an exhaust stream upstream of said hydrocarbon trap. Hirota teaches that it is conventional in the art, to provide air from an air supply device to an exhaust stream upstream of said hydrocarbon trap during purging trap (see col. 6, lines 7-36, col. 9, lines 60-67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the above step as taught by Hirota in the Okada method, since the use thereof would have increased the exhaust temperature, so as to improve the regeneration of the HC trap.

Regarding claim 7, Modica further discloses said air supply device is an air pump (23) (see col. 2, lines 63-65).

7. Claims 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirota et al. (US Patent 6,367,246) in view of legal precedent.

Regarding claim 11, Hirota discloses a method for controlling an engine, said engine communicating with a first and second emission control device, said method comprising:

combusting an air/fuel mixture rich of stoichiometry in an engine cylinder to reduce Nox stored in said first emission control device (see col. 7, lines 55-67, col. 8, lines 1-45);
applying oxygen upstream of said second emission control device, to oxidize hydrocarbons stored in said second emission control device and hydrocarbons from said combusted rich air -

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fuel mixture (see col. 6, lines 7-36, col. 9, lines 60-67); however, fails to disclose a first and second emission control device being separated from each other. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use two emission control devices being separated from each other, since it has been held that interchanging an integral part, for plural parts involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Regarding claim 12, Hirota further discloses the step of indicating when said second emission control device needs to be purged of hydrocarbons (see col. 7, lines 55-63)

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirota et al. (US Patent 6,367,246) in view of legal precedent as applied to claim 12 above, and further in view of Karlsson et al. (US Patent 6,354,078).

Regarding claim 13, the modified Hirota method discloses all the claimed limitations as discussed in claim 12 above, however, fails to disclose measuring a temperature of exhaust gases entering said second emission control device; determining when said second emission control device needs to be purged of hydrocarbons when said temperature is greater than a threshold temperature. Karlsson teaches that it is conventional in the art, to measure a temperature of exhaust gases entering said second device; and subsequently determining the second emission control device needs to be purged of hydrocarbons when said temperature is greater than a threshold temperature (see col. 7, lines 64-67).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have determined the hydrocarbon needs to be purged according to the exhaust temperature as taught by Karlsson in the Hirota method, since the use thereof would have improved the efficiency of the regeneration process of the hydrocarbon trap.

Response to Arguments

9. Applicant's arguments filed 11/18/02 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (703) 308-6073. The examiner can normally be reached on Monday -Friday from 8:00 a.m.-5:30p.m.

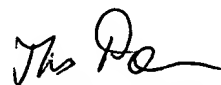
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 308-7763.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.



Diem Tran
Patent Examiner
Art unit 3748

DT
January 22, 2003



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700